

## SIZE OF THE UNIVERSE.

Miles Are Too Insignificant to Be Used in Its Computation.

While it is interesting to know the distance of some of the stars in miles, when stated in that way the numbers are so large that they frequently convey very indistinct conceptions to the mind. For this reason it is customary to estimate stars' distances in "light years." A light year is the distance that light, moving at the rate of 186,300 miles per second, travels in one year. This amounts in round numbers to 5,880,000,000 miles. The distance of Alpha Centauri is 4.35 light years, that of Sirius, the dog star, is almost exactly twice as great, or 8.6 light years. In other words, light requires 8.6 years to come to us from Sirius. And these are among the very nearest of the stars. Some whose parallaxes have been rather estimated than measured appeared to be situated at a distance which light could not traverse in less than one or two centuries. The great star Arcturus, for instance, has, according to Dr. Elkin, a parallax of only eighteen-thousandths of a second. Its distance must in that case be about 181 light years, or more than a thousand million million miles. And if its distance is so great, then, since light varies inversely as the square of the distance from its source, it can be shown that Arcturus must actually give forth 5,000 or 6,000 times as much light as the sun yields.

Yet Arcturus is evidently much nearer than the vast majority of the stars are. Not one in a million is known to have a parallax large enough even to be intelligently guessed at. There may be stars whose light requires thousands instead of hundreds of years to cross the space separating them from us.

We thus see that only a few points on the nearer shores of the starry universe lie within reach of our measurements—here and there a jutting headland, while behind stretches the vast expanse over which the hundreds of millions of stars known to exist are scattered.

## GAVE ROSTAND HIS START.

Sarah Bernhardt Had Faith in Playwright's Ability.

Edmond Rostand, the great French playwright, had the usual difficulty in getting a hearing when first he began to write for the stage. Sarah Bernhardt was directly responsible for the primal achievement of this successor of Victor Hugo. Mme. Bernhardt grew greatly interested in Rostand's first play, "La Princesse Lothaire," and suggested that he give a public reading of the manuscript at her theater.

To this reading the actress invited Coquelin, whose attention was riveted from the very first line and who, walking home with the poet, gave it an instant verdict: "It is good." "A small engagement I may have on hand and to produce your piece with the least possible delay."

Such faith as this proved a veritable backbone to Rostand, who had lost all hope of exciting interest in his work. A few years later Coquelin produced "Cyrano," the success of which has passed into histronic history. It was gratitude to Mme. Bernhardt for her share in giving him this opportunity that made Rostand write "L'Aiglon," which many critics consider the greatest tragedy of modern times. Mme. Bernhardt made a fortune from the play, which she presented not only in France, but also in England and America—New York Press.

## The Medieval Kitchen.

It was the middle ages before the kitchen had been raised to the dignity of an established apartment. Strange doings went on in those medieval kitchens. Butchers slaughtered animals there, which were skinned and dressed as well as cooked in the kitchen. The family blacksmith kept his fire there and repaired the plows and wheels of the estate. Coal began to be used as a kitchen fuel in 1245, though not generally for 200 years after. The oven did not come into use until the year 1400, and then it was the old fashioned brick oven, which persisted for hundreds of years. The stove, when invented, took the place of the separate oven and the fireplace, with its spit, crane and hanging pots.

## Break a Bad Temper.

"Anger gets more people into trouble than meanness." We do and say things while in a temper that we spend the rest of our lives in regretting. Parents should never punish their children while in anger, for if they do the child invariably gets more than it deserves. Wait till you cool down before you whip or shut up in dark closets. Then, too, if it is the child that has a temper and not yourself break it before the age of six is reached, for if you don't then that child's temper is likely never to be conquered.

## Running the Gauntlet.

"Running the gauntlet," a punishment supposed to be peculiar to the American Indians, was originated in the British navy. Every sailor in the crew but the offender to be punished was provided with a switch, which he was required to lay briskly on the bare shoulders of the man who did the running between the two lines. The Indians observed the punishment inflicted in Virginia and Canada and copied it as a form of torture.

Huxley's tables of the weights of man show that the human body is made up of thirteen different elements, of which five are gases and eight solids.

## THE COMMON SNAIL.

An Air Breathing Creature That Lives Without Air.

The common snail has lungs, heart and a general circulation and is in every respect an air breathing creature. This notwithstanding, he can live indefinitely without inhaling the least atom of air—that which is usually considered the essential to existence in all creatures supplied with lungs. Leppert says, "To all organized creatures the removal of oxygen, water, nourishment and heat causes death to ensue." When that statement was made he does not appear to consider the snail as one among the great host of "organized beings," for experiments prove that any or all the usual life conditions can be removed in its case without terminating its functions.

It is a fact well known that the common land snail retreats into his shell on the approach of frosty weather in the fall and that the opening or mouth of the shell is hermetically sealed by a secretion which is of a silky texture and absolutely impervious to both air and water. In this condition it is plain that he is deprived of three out of the four elements of life mentioned by Leppert—viz., air, water and nourishment.

Take after he has been thus handicapped for months, he may be plunged into a chemical mixture, 90 degrees colder than the degree marked at Fahrenheit's zero and allowed to remain in that chilly solution for weeks. Yet as soon as restored to normal temperature life is renewed, and the snail soon regains his natural powers, clips the silken curtain from his house door and begins to feed as naturally as though just awaking from a winter's sleep. Spallanzani kept a snail of the great helix family hermetically sealed in a glass tube from which all air had been carefully removed for a period of four years and two months, yet he declared that the creature regained all its normal functions within less than an hour after being exposed to a temperature of 90 degrees.

## SOUTHEY'S GUILLOTINE.

It Did Not Serve the Purpose For Which it Was Made.

Lord Southey once in a fit of disgust with life had a magnificent guillotine erected in the drawing room of his magnificently appointed house in the Rue de Luxembourg, at Paris. The machine was an elaborate affair, with ebony uprights inlaid with gold and silver. The framework was carved with great artistic skill, and the knife, of immense weight and falling at the touch of a spring, was of ornamental steel, polished and as sharp as a razor.

The spring which liberated the knife was placed within easy reach of any one kneeling upon the scaffold. In fact, every detail was arranged with a view to the convenience of the would-be executioner. The knife was hidden in a robe of white silk, knotted over a platform under the knife.

The guillotine was placed before a large mirror, wherein the person committing suicide could see his own image until the last. Muttering a short prayer, Lord Southey placed his head in the semicircle and pressed the spring.

The next morning he was found calmly sleeping in his bed. The spring had failed to work, and after several fruitless efforts Lord Southey was compelled to relinquish his attempt upon his life. Thoroughly cured of his spleen, he presented the guillotine to the Glasgown museum, whence he made an annual pilgrimage to see it until the end of his life.

## In the Days Before Sugar.

Once upon a time, when there was no such thing as sugar—lovers of lollipops, only think of it—bees were of much greater value than they are now, for honey was then the chief if not the only sweetener, and wax was largely used in the making of very fine candles for altars and royal banquets. Some of the laws of old Ireland so green and of little Wales dealt with the subject of bees, which shows how important as well as industrious were these busy insects. Every owner of bees was required to distribute some of his honey among his neighbors every third year. Why? Because his bees had gathered their honey from the opening flowers on his neighbor's lands. There was a nice sense of justice for you! And some there are that would like to see it applied all round, even in the present day.

## It Looked Easy to Him.

Little Nathan had been taken to his father's office, where, it appears, he was considerably impressed. Afterward at home he made known his intentions concerning the future.

"When I get to be a man," he said, "I'm going to make lots of money, like papa does."

His parents gave him to understand that they approved of his ambition, after which Nathan indulged for some time in serious thought. At last he turned to his father, asking:

"Papa, is sitting in a chair that turns around all you have to do is make money!"—Chicago Record-Herald.

## Buried Alive.

In the early history of Japan it was decidedly a dubious honor to be closely related to any person of note, for one of the laws at that time decreed that when a person of rank or importance died all the immediate relatives must be buried alive in a perpendicular position around the personage's grave. Their heads were left above the earth, and thus they remained until welcome death came to free them.

Unless you bear with the faults of a friend, you betray your own—Syrus.

## Municipal Ownership.

It has developed that for the privilege of owning and operating its own ferry to Staten Island New York city is losing more than \$500 a day, that sum representing the excess of expenses over receipts in the two months since the city took hold. This is figured out equivalent to the amount of the interest on the bonds issued to acquire the ferry, and the amount the city formerly received from the private owners under the terms of the franchise.

This is a pretty stiff price to pay for mere ownership, for the facts show that that is about all the city has acquired for its outlay. As a matter of fact, though new boats have been put on, their service is not as satisfactory as that of the old tube under private operation. In addition to this there has been a considerable increase in the number of employees and in their wages, with a marked decrease in the number of their working hours, their efficiency and the receipts from the traffic, though no decrease in the fare charged.

Defenders of the municipal ownership idea declare that this loss was expected, and in fact, predicted with considerable accuracy before it was finally decided to take over the ferry system, and that the calculation is that it will go on for several years before the operation is expected to pay. In the meantime, however, the public is suffering more than the money loss, for it is getting worse service. Time may cure these defects, but there is little encouragement in extravagance and in incompetence and inefficiency in public service in which there is no competition, for an extension of municipal ownership.—Newark Advertiser.

## How's This?

We offer One Hundred Dollars Reward for any case of Catarrh that cannot be cured by Hall's Catarrh Cure, F. J. CHENEY & CO., Toledo, O.

We, the undersigned, have known F. J. Cheney for the last 15 years, and believe him perfectly honest in all business transactions, and financially able to carry out any obligations made by his firm. WALDING, KINNAN & MAX, Wholesale Druggists, Toledo, O.

Hall's Catarrh Cure is taken internally, acting directly upon the blood and mucous surfaces of the system. Testimonials sent free. Price 75c. per bottle.

Take Hall's Family Pills for constipation.—Advt.

## For Over Sixty Years.

Mrs. Winslow's Soothing Syrup has been used for over 60 years by millions of mothers for their children while teething, with perfect success. It soothes the child, softens the gums, allays all pain, cures wind colic, and is the best remedy for Diarrhoea. It will relieve the child of sufferings immediately. Sold by Druggists in every part of the world. Twenty-five cents a bottle. Be sure and ask for "Mrs. Winslow's Soothing Syrup," and take no other kind.

DRUGGISTS, send for sample.

## Much Cry, Little Wool.

Whether or not art is to be properly considered a luxury, and as such is a proper subject for tariff taxation and revenue, there is no question that a little plain common sense regarding the matter of collecting duties on imported paintings and sculptures is a luxury. For example, the Jacksonville Union, a free-trade, or at least a tariff for revenue only, newspaper, says:

"Art is a luxury. The general public does not buy the paintings of Corot or Meisselser. Those who do buy them can well afford to pay duty on them. The tariff on works of art is a revenue tariff, and as such should be retained. Is art elevating? Sometimes it is. Sometimes it debases. But whether it is elevating or debasing, very few works of art imported into this country or produced here are ever seen by any except the wealthier classes, who are well able to pay for being elevated."

Only the works of art imported for private use and enjoyment are subjected to a tariff tax, a revenue tax. Pictures and statuary which are intended for the public view are admitted free of duty. The wealthy man or woman who imports art for the public benefit are already exempt. The clamor for 'free art' affords a very slender basis for tariff tinkering.—American Economist.

Musical Instruction.

Miss Grace